#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

### WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-022608 Address: 333 Burma Road **Date Inspected:** 31-Mar-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Mr. An Qing Xing No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes N/A **Delayed / Cancelled:** No

**Bridge No:** 34-0006 **Component: OBG** Segment

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Bay 14

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint SEG3020AQ-025 located on Anchor Plate to Side Plate at panel point 125 to 127 of OBG Segment 14W. ZPMC Welder is identified as 067520. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2211-Tc-U5b-FCM.

SMAW welding of weld joint SEG3020BB-056 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welder is identified as 067765. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020BB-074 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welders are identified as 069841 and 066261. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

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SMAW welding of weld joint SEG3020BB-011 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welder is identified as 067904. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020BB-020 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welder is identified as 045246. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW repair welding of weld joint SEG3020L-007 located on Deck Panel to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-2G-(2F)-FCM-Repair, which is used as per Welding Repair Report (WRR) B-WRR-20506.

SMAW repair welding of weld joint DP3168-001-007 located on Deck Panel to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-2G-(2F)-FCM-Repair, which is used as per Welding Repair Report (WRR) B-WRR-20505.

SMAW welding of weld joint DP3153-001-063, 064, 103, 104, 083 and 084 located on Deck Panel I-rib to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 205098. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2113-FCM-1.

SMAW repair welding of weld joint SEG3015J-012 and 009 located on Deck Panel Diaphragm to Deck Panel Diaphragm of OBG Segment 13CW. ZPMC Welder is identified as 066179. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G-(3F)-FCM-Repair, which is used as per Welding Repair Report (WRR) B-WRR-20538.

SMAW repair welding of weld joint SEG3015G-012 and 009 located on Deck Panel Diaphragm to Deck Panel Diaphragm of OBG Segment 13CW. ZPMC Welder is identified as 066179. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G-(3F)-FCM-Repair, which is used as per Welding Repair Report (WRR) B-WRR-20538.

This QA inspector observed ZPMC personnel performed Ultrasonic Testing on Side Plate to Corner Assembly Splice weld at panel point 120.5 to 122 cross beam side of OBG Segment 13BW. The weld numbers are identifies as SEG3014M-001..

Description of Incident: During random Quality Assurance In-process visual review of welds located on segment 13BW, this Quality Assurance Inspector (QA) observed one (1) Longitudinal linear indications measuring approximately 140mm in lengths. The indications were discovered visually and confirmed by Magnetic particle Testing (MT) by Caltrans ABF. The indication is clearly marked on the material near the weld. The weld number is identified as SEG3014B-204. The panel point is identified as a PP122. This weld is a Fillet weld joining the RS stiffener to Bottom Plate. The bottom plate RS stiffener weld is identified as SPCM. For further information, please see the attached pictures

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Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.





### **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar, Vibin	Quality Assurance Inspector
Reviewed By:	Patel, Hiranch	QA Reviewer